



Tennessee Valley Authority, 1101 Market Street, LP 5A, Chattanooga, Tennessee 37402-2801

August 29, 2008

10 CFR 52.79

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

In the Matter of)
Tennessee Valley Authority)

Docket No. 52-014 and 52-015

BELLEVILLE COMBINED LICENSE APPLICATION – RESPONSE TO REQUEST FOR
ADDITIONAL INFORMATION –EMERGENCY PLANNING - EVACUATION TIME
ESTIMATE

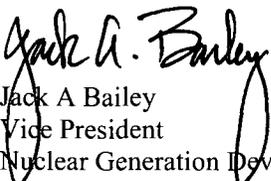
- Reference:
- 1) Letter from Brian C. Anderson (NRC) to Andrea L. Sterdis (TVA), Request for Additional Information Letter No. 093 Related to SRP Section 13.03 for the Belleville Units 3 and 4 Combined License Application, dated August 1, 2008
 - 2) Letter from Jack A. Bailey (TVA) to Document Control Desk (NRC), Response to NRC letter 069, Evacuation Time Estimate, dated August 8, 2008.

This letter provides the Tennessee Valley Authority’s (TVA) response to the Nuclear Regulatory Commission’s (NRC) request for additional information (RAI) item included in the referenced letter.

A response to the NRC request in the subject letter (Reference 1) is addressed in the enclosure which does not identify any associated changes to be made in a future revision of the BLN application.

If you should have any questions, please contact Phillip Ray at 1101 Market Street, LP5A, Chattanooga, Tennessee 37402-2801, by telephone at (423) 751-7030, or via email at pmray@tva.gov.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on this 29th day of AUG, 2008.


Jack A Bailey
Vice President
Nuclear Generation Development

Enclosure
cc: See Page 2

DOB5
AX45
NKO

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cc: (Enclosures)

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P. S. Hastings, NuStart
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G. A. Zinke, NuStart

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B. Anderson, NRC/HQ
M. M. Comar, NRC/HQ
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R. G. Joshi, NRC/HQ
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M. C. Kray, NuStart
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C. R. Pierce, SNC
R. Register, DOE/PM
L. Reyes, NRC/RII
J. M. Sebrosky, NRC/HQ

Enclosure
TVA letter dated August 29, 2008
RAI Response

Response to NRC Request for Additional Information letter No. 093 dated August 1, 2008
(4 pages, including this list)

Subject: Emergency Planning for the Bellefonte Units 3 and 4 Combined License Application

<u>RAI Number</u>	<u>Date of TVA Response</u>
13.03-17	This letter – see following pages

<u>Associated Additional Attachments / Enclosures</u>	<u>Pages Included</u>
None	

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NRC Letter Dated: August 1, 2008

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER: 13.03-17

Description: ETE-1: Estimated Population Growth

SRP Chapter 13.3 Acceptance Criteria 17

Regulatory Basis: 10 CFR Part 50, Appendix E.IV, introductory paragraph; Appendix 4 to NUREG-0654

(a) Table 2.1-203, "Projected Permanent Population for each Sector 0-10 Mi.," of Chapter 2, "Site Characteristics," of Part 2 of the FSAR states that 2017 is the construction completion date for the reactors, and it projects population to the years 2007, 2017, 2027, 2037, 2047, and 2057. However, page 3-3 in the document titled "Bellefonte Nuclear Plant, Development of Evacuation Time Estimates," dated September 2007 (the BLN ETE), states that the construction year for the new unit at BLN is assumed to be 2015. Discuss the rationale for selecting 2015 and 2017 as the dates from which to project populations as opposed to the projected date of COL issuance, the date from which the BLN Emergency Plan must be maintained current.

(b) Table 3.1, "EPZ Permanent Resident Population," of the BLN ETE shows population in the years 2000 and projected population in 2007. Confirm that evacuation times are estimated on the basis of 2007 population estimates or specify the year for which evacuation times are estimated.

(c) Page 3-3 of the BLN ETE states that the same population is used in 2007 for permanent residents in the EPZ and in the shadow area for the construction scenario (Scenario 12). For scenario 12, the footnote to Table 6-4, "Vehicle Estimates By Scenario," of the BLN ETE states that the projected construction year is 2015 and that based on discussion with Enercon Services, the permanent resident population and shadow population have not been extrapolated to 2015. The footnote further states that comparison of the 2000 Census and 2006 Census estimates indicate that the population is growing; however, the 2007 population estimates have been maintained for 2015 as a conservative basis. Provide an explanation regarding why using 2007 population estimates in Table 6-4 is conservative.

(d) Discuss whether special events, such as the Jackson County Fair in Scottsboro, Heritage Day, the Frantic Frog Triathlon, fishing and golf tournaments and music festivals, should be included in the BLN ETE. If they should have been included, discuss their impact on the number of transient persons and the impact on the BLN ETE.

BLN RAI ID: 1103

BLN RESPONSE:

(a) The year 2015 was projected as the peak construction year and was used as the basis for special event scenario No. 12. The selection of the peak construction year provides an upper bound for the ETE while the units are under construction. The conditions associated with this special event scenario are documented on page 3-3 of the ETE. The projected date for COL issuance is not pertinent to the ETE, as that date would not include the peak construction population. Also, as discussed in (c), below, the projected population growth between 2007 and the projected COL issuance date would have no significant effect on the ETE.

(b) As shown on ETE Table 3-2 and in ETE Figures 3-2 and 3-3, the estimated number of permanent residents and vehicles is based on the year 2007 data. These resident population estimates are used in the calculations of ETE for all scenarios.

(c) The 2007 population estimate coupled with the 2015 peak construction workforce used for Scenario 12 in the ETE was considered conservative because: 1) there was a high level of confidence in

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that estimate, given that it was based on the most recent population data; 2) the projected population growth rate in the plume exposure pathway EPZ is relatively low; and 3) the peak construction work force will not be present during single unit operation. The population projections provided in FSAR Table 2.1-203 estimate a permanent resident population growth of 1,929 people (approximately 7.6%) for the 16 kilometer radius surrounding the site between 2007 and 2017. This projected population growth is bounded by both the plant construction scenario provided in the ETE and the Jackson County Fair sensitivity study previously provided in response to NRC RAI No. 13.04-06(c) (see response to BLN-RAI-LTR-069, Reference 2). Also, this projected population growth falls below the 10% threshold for which an ETE update may be needed, as suggested by NUREG/CR-6863. Therefore, it is unlikely that the projected population growth will have any significant effect on the ETE.

(d) As indicated in TVA's response to NRC RAI No. 13.04-06(c) (see response to BLN-RAI-LTR069, Reference 2), the effect of the Jackson County Fair has been evaluated in a sensitivity study that has been issued as a supplement to the Bellefonte ETE Report. The Jackson County Fair is held at the fairgrounds on Cecil Street in Scottsboro. The fair is held in September and begins on a Monday and ends on the following Saturday, from 5:30 to 10:30 each evening. The peak attendance at the fair is on Monday evening and is estimated as 12,000 people, 75% of whom travel more than 10 miles to the event, based on data provided by the Scottsboro Chamber of Commerce.

The Jackson County Fair is considered a special event for ETE purposes. The peak attendance at the fair far exceeds the attendance at the other events detailed below. Also, the fair is held within Scottsboro, which is the most heavily congested area in the EPZ. (See Figures 7-3 through 7-6 of the ETE report.) Therefore, the effect on ETE for the Jackson County Fair represents an upper bound of all special events discussed below. The sensitivity study indicated that the Jackson County Fair has no significant effect on the ETE. Thus, the special events discussed below would also have no significant effect on the ETE and need not be included.

- The Heritage Day Festival takes place at the Scottsboro Jackson Heritage Center on Houston Street in Scottsboro. The festival includes a Saturday event for the general public and a Friday field trip for local school children. There are typically 17-20 vendors/exhibitors and 250 to 400 people visiting for the event. Most of the people attending the event travel more than 20 miles to get there. The event begins at 9:00 am and lasts until 4:00 pm. The average visitor stays 2 to 3 hours. The parking lot capacity at the heritage center is 60 vehicles.
- The Frantic Frog Triathlon is held annually at Goose Pond Colony on a Saturday in September. There were 292 competitors in the 2004 triathlon, 334 in 2005, 358 in 2006, and 367 in 2007. These data indicate that the number of competitors is increasing each year. Analysis of the 2007 results indicates that 98% of the competitors are non-EPZ residents. It is likely that each competitor will have fans in attendance. The competitor and his fans will likely travel to the event in a single vehicle. Therefore, there could be approximately 400 additional vehicles at Goose Pond Colony during the Frantic Frog Triathlon.
- The McDonald's Big Bass Splash is held at the Waterfront Tackle and Grill at Goose Pond Colony. Registration is on Friday, fishing is on Saturday and Sunday, and prizes are awarded on Sunday afternoon. There are typically 300 fishermen competing, and approximately 2,000 to 3,000 fans in attendance, especially during the awards ceremony. Fishermen haul their own boats and launch them at one of the 17 ramps within the county. Most of those visiting for the tournament travel more than 10 miles and are presumably not EPZ residents. Those who do stay overnight do so at area hotels and motels.
- The 4th of July celebration at Goose Pond Colony draws 200 to 300 boats and 5,000 to 10,000 visitors. The ETE affect for this event is bounded by the sensitivity study for the Jackson County Fair discussed above.

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The response to NRC RAI No. 13.04-06(c) (see response to BLN-RAI-LTR069, Reference 2) also provides further information on golf and fishing tournaments within the EPZ.

Internet searches indicate that the major music festival in the Scottsboro area is the Sand Mountain Gospel Music Festival. The festival is held annually on the campus of Northeast Alabama Community College, which is outside of the EPZ. Therefore, this event is not considered a special event.

This response is PLANT-SPECIFIC.

ASSOCIATED BLN COL APPLICATION REVISIONS:

No COLA revisions have been identified associated with this response.

ASSOCIATED ATTACHMENTS/ENCLOSURES:

None